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XVIII.—Contributions to the Ornithology of the Sudan.— No. IV.\* On Birds observed on the Red Sea Coast in May 1908. By A. L. BUTLER, F.Z.S., M.B.O.U., Superintendent of Game Preservation, Sudan Government.

I SPENT the month of May in 1908 on the Red Sea coast in the vicinity of Port Sudan, and the ornithological notes then made form the subject of this paper. The dates on which migratory birds were met with were carefully recorded daily. The great number of Blackcaps, Garden-Warblers, and Barred Warblers seen was remarkable, and the main line of migration of these three species seems, in the Sudan, to lie along the Red Sea coast. None of them is ever abundant at Khartoum, and I often saw more of them in half an hour than I have seen in eight years in the Nile Valley. I was surprised to find them still in such numbers in Africa late in May. Possibly these late individuals are the birds from the most northern parts of the range of the species.

Port Sudan lies about forty miles north of Suakin. A flat scrub-covered plain extends from the sea to the ranges of barren mountains twenty or twenty-five miles inland, sandy near the coast, and becoming stony as the hills are neared. Through these rocky hills runs a narrow valley known as the Khor Arbat, in which is that delightful rarity in the Sudan, a permanent flowing stream. This loses itself in the sands of the plain shortly after emerging from the hills. I found the

<sup>\*</sup> See 'The Ibis,' 1905, p. 301, 1908, p. 205, and 1909, p. 74. SER. IX.—VOL. III. 2 p

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vicinity of the stream a capital camping-place and collectingground, where birds were abundant. In some places the little river ran twenty yards wide and a foot deep, babbling over grey, water-rounded stones; in others it formed narrow, dark, deep pools under precipitous faces of rock, and offered me the delightful luxury of a swim in cool water. On both sides of the Khor rose high, rocky hills, intersected by little winding valleys descending to the stream. The hills themselves were very barren and almost entirely composed of rock, but along the stream there was plenty of cover, chiefly consisting of fringes of various thorny acacias and of tamarisks forming dense thickets. The stream teemed with a tiny fish, Cyprinodon dispar, of which the sexes are so unlike in appearance that I at first imagined that they were two quite different species. They were literally in millions; I have never seen water so full of fishes anywhere, and their presence in every little stagnant pool, as well as in the main stream, doubtless accounted for the almost total absence of mosquitoes. I saw one albino of this fish, but, though I tempted him repeatedly to swim over a submerged handkerchief, he always eluded the raising of this primitive net. the deeper, darker pools water-tortoises, Pelomedusa galeata, moved slowly about or scuttled in and out of rocky crevices; at dusk they came out to the shallows. They were very numerous, and I counted thirty, and captured thirteen for the Giza Zoological Gardens, on my last evening. A toad, Bufo dodsoni, was plentiful under stones along the water's edge, and a bluish lizard with an orange-red head, the name of which I do not remember, was common and conspicuous on the rocks. Of mammals in this neighbourhood, the principal was the Nubian Ibex, which was fairly plentiful on the larger hills; I shot one on Jebel Bawati, a good male with horns of 381 inches. The Isabelline Gazelle was met with here and there in valleys among the hills, but was not very plentiful in this particular locality. I obtained specimens of that large-eared, slender-limbed Fox, Vulpes famelica, of the pretty, but evilsmelling Zorilla (Ictonyx erythreæ), of a Hyrax (Procavia ruficeps), a Spiny Mouse, and a Gerbil.

Jebel Bawati, or Bawateb (5514 feet), is one of the largest eminences in the near vicinity. It lies back among the other hills some forty miles north-west of Port Sudan, and is about one march from the Khor Arbat.

The natives of this district are Hadendowa of the Amarar tribe

#### 1. NECTARINIA METALLICA Licht.

a-h. Five adult males, one young male, and two females. Khor Arbat, 1.5.08 to 6.5.08.

The Metallic Sun-bird was very abundant and the males were in perfect breeding-dress. Beautiful little parties of this species and the Abyssinian Sun-bird used to collect on trees in flower near the water. One male, though otherwise in perfect breeding-plumage, still retained the short dull-coloured tail; it appeared, on dissection, to be breeding.

#### 2. CINNYRIS HABESSINICUS (Hempr. & Ehr.).

a-g. Three adult males and four young males. Khor Arbat, 1.5.08 to 8.5.08.

The Abyssinian Sun-bird was very plentiful in the Khor Arbat. The males had not quite completed the moult, and shewed many quills about the head and neck.

# 3. Motacilla alba Linn.

The only White Wagtails I saw were two in the Khor Arbat on May 13th.

# 4. Motacilla flava Linn.

I saw very few Yellow Wagtails in the Khor Arbat, and only obtained four specimens. Black-headed birds were seen on the first five days in May, and various grey-headed birds up to the 16th. In treating these birds subspecifically I do so with hesitation, and will, for the present, keep a note of interrogation after each.

# (i.) Motacilla flava flava Linn.?

# a. 9. Khor Arbat, 13.5.08.

This was the last Yellow Wagtail I saw, excepting one on May 16th. From its very marked pale supercilium and a touch of whitish on the ear-coverts I ascribe it to this form.

(ii.) Motacilla flava cinereocapilla Savi?

a. d. Khor Arbat, 6.5.08.

Mr. M. J. Nicoll, who has kindly noted his opinions on the labels of a large series of Yellow Wagtails collected by me in the Sudan, has marked this bird M. f. flava. It has, however, much more white on the throat than any of my large series of that form, and, though it has a broad and distinct white eyebrow, the lores and ear-coverts are very dark blackish grey, and the ear-coverts shew no traces of white. I should call it M. f. cinereocapilla with an unusually well-defined superciliary stripe. The testes were of the size of hemp-seeds.

(iii.) Motacilla flava pygmæa A. E. Brehm?

a. d. Khor Arbat, 12.5.08.

I have a typical specimen of this well-marked small resident Egyptian race, with a wing of 73 mm., kindly given me by Mr. M. J. Nicoll. My Khor Arbat bird almost exactly agrees with it, but has a wing of 78 mm.; it was apparently paired with a female which I did not get. There were only two birds in all, in what seemed quite a likely breeding-place, near permanent running water. The testes of this bird were enlarged to about the size of hemp-seeds, as in the bird referred to M. f. cinereocapilla. These are the only two Yellow Wagtails that I have shot in the Sudan in the spring in which the testes have been at all enlarged.

I notice that in Mr. Nicoll's Egyptian specimen of M, f. pygmaa the longest secondary exceeds the longest primary by 1 mm. I have before me some fifty skins of Yellow Wagtails, including M. f. raii, M. f. flava, M. f. melanogerisea, M. f. borealis, &c., and this is the only bird in which this is the case. I do not know if this is the rule in M. f. pygmaa, but if so, the slight difference in the proportionate length of primaries and secondaries in the nonmigratory bird would be interesting. In my slightly larger Khor Arbat bird, however, the secondaries fall short of the primaries by 7 mm.

- (iv.) Motacilla flava melanocephala Licht.?
- a. ♀. Khor Arbat, 5.5.08.

A few Black-headed Yellow Wagtails were seen along the stream for the first five days of May. This female was with two or three of these, and probably is of the same subspecies. There is hardly any trace of a pale eyebrow.

5. ALÆMON ALAUDIPES (Desf.).

Fairly frequent round Port Sudan and along the coast plain.

- 6. GALERIDA CRISTATA (Linn.).
- a-d. Three males and one female. Port Sudan, 19.5.08.

Crested Larks were very common round Port Sudan and along the coast. I took my examples to Tring to get them subspecifically identified, and they appeared to agree best with G. c. brachyura Tristr., of Palestine.

- 7. Ammomanes deserti (Licht.).
- a. 3. Jebel Bawati, 11. 5. 08.
- b. ♀ juv. Khor Arbat, 1.5.08.
- c. 9. Khor Arbat, 1.5.08.

Pairs and small parties of these little Desert-Larks were met with daily among the rocky ground near the hills.

- 8. Pyrrhulauda melanauchen (Cab.).
- a. d. Port Sudan, 25.5.08.

These Finch-Larks were abundant near the coast. I met with one or two very large flocks of some hundreds. They all seemed to be in full moult.

- 9. Emberiza septemstriata Rüpp.
- a. ♀. Khor Arbat, 2.5.08.

Pairs and small parties of this little Rock-Bunting were fairly frequent among the hills. I noted them on eight of the first sixteen days of May.

- 10. ÆDEMOSYNE CANTANS (Gm.).
- a.  $\circ$ . Talgwareb Station, 29.4.08.

I shot this bird at a station on the Red Sea Railway on my way to Port Sudan, but I did not note it on the coast. 11. HYPHANTORNIS GALBULA Rüpp.

a-f. Five males and one female. Khor Arbat, 2.5.08 to 6.5.08.

These Weavers were very plentiful, and busily engaged in building nests on the tamarisks and acacias near the stream.

12. ORIOLUS GALBULA Linn.

I only noticed the Golden Oriole twice in the Khor Arbat, on May 4th and 17th. Both individuals were adult males.

13. Corvus Affinis Rüpp.

This Crow was seen at Jebel Bawati and among the hills.

14. Corvus umbrinus Sundev.

This species was the common Crow round Port Sudan and on the coast.

- 15. LANIUS LEUCONOTUS Brehm.
- a. 3 (breeding). Khor Arbat, 13.5.08.
- b. & (breeding). Jebel Bawati, 9.5.08.

These birds were noted daily throughout the month, and I think that most of them were breeding. On May 16th I found a nest containing four young, placed about four feet from the ground in a "Marakh" bush (Leptadenia spartium).

- 16. LANIUS ISABELLINUS Ehr.
- a. d. Khor Arbat, 4.5.08.

An adult male in very perfect plumage. This was the only Isabelline Shrike I noticed during the month.

17. Lanius nubicus Licht.

The Masked Shrike was common in the Khor Arbat.

18. Rhodophoneus cruentus (Hempr. & Ehr.).

a. d. Port Sudan, 18. 5.08.

Seen a few times on the plain between Port Sudan and Khor Arbat. In the young male the pink of the breast extends up on to the throat, as in the adult, but is there bordered by a narrow black line on each side—an inclination towards the plumage of the female.

- 19. Argya Acaciæ (Licht.).
- a. 3. Jebel Bawati, 8.5.08.
- o. d., ", ", ", c. d juv. Port Sudan, 22.5.08.

Lichtenstein's Desert-Babbler was common in the bush between the coast and the mountains. A female shot on May 9th contained a perfect egg, and I took a clutch of five fresh eggs from a nest in a thorn-bush in the town of Port Sudan, on May 24th.

20. Pycnonotus arsinoe (Hempr. & Ehr.).

This Bulbul was common round Port Sudan and in the Khor Arbat.

- 21. Prinia gracilis (Licht.).
- a. d. Khor Arbat, 4.5.68.
- b. 9. 4.5.08.

Fairly numerous in the tamarisk-thickets near water. The two specimens shot were in breeding condition.

- 22. CERCOTRICHAS PODOBE (P. L. S. Müll.).
- a. 3. Khor Arbat, 2.5.08.
- b. ♀. 14.5.08.

The Black Bush-Robin was common in the scrub along the coast plain, and in the tamarisk-thickets of the Khor Arbat.

23. Acrocephalus streperus (Vieill.).

I shot a Reed-Warbler on May 5th, and perhaps overlooked others among the Pallid Warblers, but the bird was certainly not plentiful.

- 24. Hypolais Pallida (Hempr. & Ehr.).
  - a. Q. Talgwareb Station, 29.4.08.

The Pallid Warbler was numerous round Port Sudan and in the Khor Arbat for the first ten days of May, and was noted less frequently up to the 24th.

25. SYLVIA HORTENSIS (Gm.).

a. ♀. Khor Arbat, 1.5.08.

 $b. \ \ ?. \ \ ,, \ \ \ 4.5.08.$ 

Garden-Warblers were, perhaps, even more numerous than Blackcaps. Their numbers shewed no diminution until the 16th of May, when there was a great decrease, and on the 18th I noted only a few individuals.

26. SYLVIA ATRICAPILLA (Linn.).

a. d. Khor Arbat, 2.5.08.

Immense numbers of Blackcaps assembled along the coast during the first half of May, together with Barred and Garden-Warblers. These three species seemed everywhere, and abundant as the Barred Warblers were, the Blackcaps and Garden-Warblers greatly outnumbered them. I saw very great numbers of this species daily from May 1st to the 11th, and large numbers again on the 14th and 16th. I spent the next few days looking for sea-birds, and saw no more Blackcaps afterwards.

27. Sylvia Nisoria Bechst.

a. d. Khor Arbat, 4.5.08.

b. d. ,, 5.5.08.

c. ♂. ,, 5.5.08.

d. d. ,, 1.5.08.

e. ♂. ,, 1.5.08.

f. ? . Port Sudan, 30. 4. 08.

The numbers of migrating Barred Warblers which I saw during the first week in May astonished me. During that time the scrubby thorn-bush between the coast and the hills was full of them. Often there were eight or ten in one small thorn-tree, and frequently one could have killed three or four at a shot. Indeed, I twice killed two with the same shot unintentionally. For the first five days of May there must have been thousands of them within a comparatively small radius round my camp. Certainly I saw hundreds in a morning, and it was the same in whichever direction I wandered in the bush. On the 6th and 7th of May these great numbers shewed a considerable decrease. From the

8th to the 12th I travelled inland among barren hills where there was little cover, and on my return I saw no more Barred Warblers, though for several days later the Black-caps and Garden-Warblers remained as plentiful as before. All specimens of these three species were in perfect plumage, and I made some beautiful skins of them, though it required time and patience to turn them out unsoiled, as they were simply little balls of fat, which melted into oil directly I started working on them in the extreme heat; and, unless a cheap thermometer deceived me, the temperature one afternoon rose to 135° in my tent, when the sun was full on it.

On the Nile the Barred Warbler seems quite uncommon. Witherby met with a few, but neither Rothschild and Wollaston nor Hawker came across it. At Khartoum I have only recognised it once, in October.

- 28. SYLVIA BLANFORDI Seebohm.
- a. d. Khor Arbat, 4.5.08.

This, a male in breeding condition, was the only specimen of Blanford's Warbler that I noticed.

- 29. Sylvia curruca (Linn.).
- a. 3. Khor Arbat, 2.5.08.
- b. ♀. ,, 3.5.08.

The Lesser Whitethroat was plentiful from May 1st to May 5th, but I did not note it after May 9th.

- 30. Sylvia cinerea Bechst.
- a. d. Port Sudan, 30. 4. 08.

This example is the only greater Whitethroat that I have so far identified in the Sudan.

- 31. Aëdon galactodes (Temm.).
- a. & (breeding). Khor Arbat, 13.5.08.

Rufous Warblers were common in the Khor Arbat, and were probably breeding in the tamarisk-thickets.

32. Ruticilla phenicurus (Linn.).

Either I was too late for the migrating Redstarts or I was not on their line. One individual at Port Sudan on April 30th, and another in the Khor Arbat on May 3rd, were all the examples that I saw of this common winter-visitor.

33. SAXICOLA MELANOLEUCA (Güld.).

Saxicola melanoleuca occidentalis Salv.

a. 9. Khor Arbat, 6.5.08.

b. 3. ,, 7.5.08.

The birds obtained at Khor Arbat belong to the western form of the Black-throated Chat, with a markedly smaller black gorget than in S. melanoleuca (Güld.), the eastern bird, which is the form commonly met with in the Sudan from autumn to spring. I only met with the three examples shot, and unfortunately both the female specimens were destroyed by a cat when drying. I compared the male with both forms at the Natural History Museum, and Mr. M. J. Nicoll, whom I asked to examine it, also attributes it to the western subspecies.

A Black-throated Chat shot at Khartoum on April 4th, 1908, also appears to me to be S. m. occidentalis. In both this and the Khor Arbat bird, besides the smaller amount of black on the throat, the wings measure 87 mm. against 89 mm. in several specimens of S. m. melanoleuca. In both the testes were much enlarged, which was not the case in specimens of S. m. melanoleuca shot in April.

34. SAXICOLA LEUCOPYGIA Brehm.

Of the fifteen males collected seven have the cap pure white, two have the cap white except for a single black feather, in four the cap is mixed black and white, in one the head is entirely black, and in another (the only breeding male) there is only a single white feather on the crown.

Of the three females two (one of which had large eggs in the ovary) have the cap pure white, and the third has the head entirely black. This handsome Chat is very abundant on the hills along the Red Sea coast, and its jetty black and snowy white plumage make a pleasing contrast to the sombre surroundings of rock. It breeds before assuming the white crown, and pairs may be seen composed of two white-capped birds, two black-headed birds, or one of each.

- 35. Myrmecocichla leipura (Hempr. & Ehr.).
- a. & (breeding). Jebel Bawati, 9.5.08.
- b. J. Jebel Bawati, 9.5.08.
- c. d. Khor Arbot, 5.5.08.
- d. 3 juv. " 7.5.08.
- e. 3. , 1.5.08.

These little Ant-Chats were common in the hills round Khor Arbat, and especially numerous near the stream. They were charmingly tame and familiar, venturing very close to my tent. The young bird (d) had apparently only left the nest a few days.

- 36. Muscicapa grisola Linn.
- a. 9. Khor Arbat, 2.5.08.

A few Spotted Flycatchers were seen during the first four days of May only.

37. BATIS ORIENTALIS Heugl.

A single individual seen among a few stunted trees high up on Jebel Bawati was the only specimen of this little Flycatcher that I noticed (May 11th).

38. HIRUNDO RUSTICA Linn.

The Common Swallow was numerous during the whole month. I noted it daily from May 1st to 29th, excepting from the 9th to 12th, when I was at Jebel Bawati.

39. HIRUNDO URBICA (Linn.).

Some House-Martins were seen on the first four days of May.

40. COTILE RIPARIA (Linn.).

Sand-Martins were common during my stay, and were noted daily, except at Jebel Bawati, from April 30th to May 29th.

- 41. PTYONOPROGNE OBSOLETA (Cab.).
- a. d. Khor Arbat, 6.5.08.

This Cliff-Swallow was common on the rocky hills round

Khor Arbat and at Jebel Bawati. A pair were building on a rock-face in the Khor when I arrived there on May 1st, but the necessity of shade compelled me to pitch my tent immediately under their nest, which caused them to forsake it.

#### 42. CYPSELUS APUS (Linn.)?

I saw a single Swift, which looked like C. apus, in the Khor Arbat on May 14th.

- 43. Cypselus Affinis Hardw.
- a. d. Khor Arbat, 4.5.08.

These little White-rumped Swifts were common among the hills. They generally flew high, descending occasionally to skim over the pools in the khor.

- 44. CAPRIMULGUS NUBICUS Licht.
- a. d. Khor Arbat, 15.5.08.

This was the only Nightjar met with near the Red Sea coast. It was observed or heard every evening along the tamarisk-thickets near water in the Khor Arbat, but in these valleys between high hills it was very difficult to see to shoot it after dusk. The note is a liquid sound, like "chukku! chukku! chukku!"

#### 45. MEROPS APIASTER Linn.

Large numbers of Common Bee-eaters appeared at the Khor Arbat on May 6th and 7th, and joined the Blue-cheeked birds among the tamarisks. When both are heard together there is a considerable difference between their notes, the call of *M. persicus* being shriller than that of the common species.

- 46. Merops persicus Pall.
- a. 9. Khor Arbat, 2. 5. 08.
- b. ♀. ,, 1.5.08.
- c. ♂. ,, 16.5.08.

Large numbers of the Blue-cheeked Bee-eater frequented the tamarisks in the Khor Arbat all the time that I stayed there (May 1st to 16th). 47. UPUPA EPOPS Linn.

I only noted Hoopoes on the 2nd and 4th of May.

48. Irrisor Erythrorhynchus (Lath.).

I picked up the sun-dried remains of a Red-billed Wood-hoopoe in the Khor Arbat. I imagine this must be about the northern limit of its range along the Red Sea coast.

- 49. Trachyphonus margaritatus (Rüpp.).
- a. d. Talgwareb Station, 29. 4.09.
- b. d. Khor Arbat, 4.5.08.

These Barbets were fairly common in the Khor Arbat. The tail of the second specimen was bent in a curve; probably it had been sitting in a nest-hole.

- 50. CAMPOTHERA NUBICA (Gm.).
- a. d. Khor Arbat, 7.5.08.

I saw the Nubian Woodpecker a few times in the Khor Arbat.

- 51. IYNGIPICUS OBSOLETUS (Wagl.).
- a. d. Khor Arbat, 7.5.08.

I only saw the Pigmy Woodpecker three or four times.

52. COLUMBA LIVIA Briss.

A small colony of Rock-Pigeons frequented the clefts in a very high and precipitous rock-face near my camp in the Khor Arbat, but I could not get a shot at them.

- 53. Turtur Roseigriseus (Sundev.).
- a. J. Khor Arbat, 16.5.08.
- 54. Turtur senegalensis (Linn.).

Both this species and the last were common in the Khor Arbat.

55. ŒNA CAPENSIS (Linn.).

Common in the Khor Arbat and near the coast.

\*56. ATHENE NOCTUA SPILOGASTER.

Athene spilogaster Heuglin.

a. d. Jebel Bawati, 11.5.08.

This was the only example of this little Owl that I have seen in the Sudan. I got it quite by chance, as I had wandered out by moonlight to try to shoot an Eagle-Owl

that was calling somewhere near, and on returning noticed a dark lump on the top of a small leafless tree which, I remembered, had no such lump on it in the daytime. A shot at this object resulted in its remaining stationary, but its shape seemed to have changed, and on my shaking the tree the little Owl fell to the ground.

#### 57. Bubo ascalaphus Sav.

The Desert Eagle-Owl was often heard at night among the hills, but I did not come across it in the daytime.

#### 58. FALCO, sp. inc.

A pair of Falcons were noticed several times at the Khor Arbat, but were not identified.

#### 59. HELOTARSUS ECAUDATUS (Daud.).

I saw a single Bateleur Eagle in the Khor Arbat, and a pair at Jebel Bawati.

#### 60. Aquila imperialis Bechst.

A pair of Imperial Eagles frequented the Khor Arbat, and used to glide along the higher slopes of the hills in sight of my tent every day, apparently hunting for Hyraxes. I saw another pair on Jebel Bawati. I was anxious to get a specimen, and, as it was useless to climb about such steep hills after birds with such powers of wing, I set a trap for them, baited with a dead kid, on the summit of a small hill within view of my camp. I soon, however, got tired of climbing up and down five hundred feet of rock to release Egyptian Vultures, and had to give up the attempt. A rat-trap with the teeth blunted held the Vultures without injuring them at all.

#### 61. Buteo desertorum (Daud.).

I saw these Buzzards daily in the Khor Arbat.

# 62. Gyps Rueppelli Brehm.

Vultures, which I think belonged to this species, were frequently seen high in the air.

# 63. NEOPHRON PERCNOPTERUS (Linn.).

Egyptian Vultures were abundant everywhere.

64. Butorides atricapillus (Afzel.).

One example was seen at the edge of the harbour, on April 30th.

- 65. Sula sula Linn.
- a. 9. Port Sudan, 22.5.08.

The Brown Booby was very plentiful in the harbour and very tame.

- 66. Sterna saundersi Hume.
- a. 3. Port Sudan, 26.5.08.
- *b*. ♀. ,, ,, 26.5.08.
- c.  $\delta$ . ,, ,, 24.5.08.

Numbers of these dainty little Terns frequented a beach of coral and sand on the south of Port Sudan harbour with a persistence that caused me to spend some time in searching for eggs. The specimens shot, however, were not in breeding condition.

- 67. STERNA BERGII Licht.
- a. d. Port Sudan, 22.5.08.
- 68. STERNA MEDIA Horsf.
- $a. \ \$  ? . Port Sudan, 27. 5. 08.
- b. \cong ., ,, 24.5.08.

Both this large Tern and the last were abundant in Port Sudan harbour during May.

- 69. LARUS FUSCUS Linn.
- a. 9. Port Sudan, 23. 5. 08.

The Lesser Black-backed Gull was fairly common in Port Sudan harbour.

- 70. Larus leucophthalmus Temm.
- a. S. Port Sudan, 22.5.08.
- b. d. ,, ,, 22.5.08.
- c. 3. ,, ,, 23.5.08.

Extremely abundant in the harbour and very tame. Immature brown birds were much more numerous than adults.

- 71. Ammorerdix Cholmleyi Grant.
- a. 3. Khor Arbat, 2.5.08.
- b. 3. ,, 2.5.08.

These little Rock-Partridges were tolerably common in the hills through which the Khor Arbat runs. They came down to the water at mid-day, and, after drinking, spent the heat of the day under bushes and creepers along the edge of the stream.

Francolinus erckeli (Rüpp.) was not seen, and does not, I think, extend north of Erkowit.

#### 72. Pterocles exustus (Temm.).

Common round Port Sudan, but I did not see large numbers together.

- 73. PTEROCLES LICHTENSTEINI Temm.
- a. d. Khor Arbat, 16.5.08.

These beautiful Sand-Grouse were fairly plentiful in the Khor Arbat and at Jebel Bawati. I saw little of them in the daytime, beyond flushing a few occasionally among the rocks, but every night small parties of them came flying down to the khor to drink, until considerable numbers were collected along the stream. They did not arrive at the water until dusk was merging into darkness, but continued to come until after 8 p.m. Indeed, it was most difficult to see to shoot even the earlier birds, as they flew low, and the high hills shutting in the khor prevented me from getting them straight against the sky-line. The call of this species is a sharp, clear double whistle, like "quittoo! quittoo!," repeated two or three times, and by 8 o'clock this, and an occasional rattle of wings, sounded on all sides, long after the birds themselves had become invisible.

The crop of the male skinned was full of the seeds of an acacia. I have also seen Lichtenstein's Sand-Grouse among the hills between Suakin and Kassala, and near the Shabluka Cataract, fifty miles north of Khartoum, but only among rocky hills.

74. ÆGIALITIS GEOFFROYI (Wagl.).

These Sand-Plovers were seen along the shore till May 26th.

75. PAVONCELLA PUGNAX (Linn.).

A flock of Ruffs flew low over me in the Khor on the 14th of May.

76. Totanus glareola (Linn.).

a. 9. Khor Arbat, 13.5.08.

A few Wood-Sandpipers were seen along the stream in the Khor Arbat, on the 6th, 7th, 12th, and 13th of May.

77. Totanus hypoleucus (Linn.).

Common Sandpipers were noted on the first seven days of May.

# Corrections to previous "Contributions to the Ornithology of the Sudan."

#### No. I. ('Ibis,' 1905, p. 301).

P. 321. No. 45.—The bird referred to as Lagonosticta nigricollis Heugl. was L. Larvata Rüpp. (see 'Ibis,' 1908, p. 219).

- P. 337. No. 104.—The Nightingale referred to as Lusciola Golzi (Cab.) is L. Philomela (Bechst.). I greatly regret this serious error. By a slip a wrong identification of my first specimen was given me by a high authority, and I named subsequent specimens from comparison with this skin. Plentiful as these "Sprossers" are in Khartoum during their autumn migration southwards, I have never seen them at all in the spring, and believe that they must return north on a different line.
- P. 358. No. 175. VINAGO WAALIA (Gm.)?—The note should be taken as applying to VINAGO CALVA (Temm. & Knip).
- P. 369. No. 215. ASTUR UNDULIVENTER (Rüpp.)?—This was ASTUR SPHENURUS Rüpp.
- P. 382. No. 261.—For Rhynchops flaviventris read R. flavirostris Vieill.

#### No. II. ('Ibis,' 1908, p. 205).

P. 233. No. 118.—For Luscinia golzi (Cab.) read L. Philomela (Bechst.).

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#### No. III. ('Ibis,' 1909, p. 74).

- P. 79. Lamprocolius chalybæus (Ehr.).—The birds from Tembura and Wan, in the Bahr-el-Ghazal, are L. chalcurus (Nordm.), in which the tail is strongly glossed with reddish violet. The female from Tawela, on the Nile, is L. chalybæus, with no violet on the tail, and agrees in this with all other specimens from that river.
- P. 82. CAMAROPTERA BREVICAUDATA (Rüpp.).—If C GRISEOVIRIDIS (v. Müll.) is distinct, these two birds should stand under the latter name.

XIX.—Notes on some Birds observed on the Trans-Siberian Railway Line. By Staff-Surgeon Kenneth H. Jones, R.N.

As a means of transit from the Far East to Europe, the Trans-Siberian Railway is now so well known that it is unnecessary to say much about it as a highway.

Commencing at Vladivostok, on the Pacific coast of Northeastern Asia, it runs both east and north across Manchuria and Transbaikalia, through ten degrees of latitude, to Irkutsk, near the south-western shore of Lake Baikal, and thence almost due west over the great Siberian Plain to the Ural Mountains. After crossing the Urals into Europe, the line continues in a westerly direction for about two days' journey and then turns northward to reach Moscow. As a means of making a land-journey with ease and rapidity through many degrees of longitude, over a wide tract of the Palæarctic Region, and through the areas of distribution of many species of birds, it offers unequalled facilities to the ornithologist.

Moreover, birds, of all the wild inhabitants of this region, alone give an opportunity to an observer of making notes from the train itself, and this the more easily because of the slow progress and of the many, and often lengthy, stoppages which occur—frequently in the woods and steppes themselves.

It is, of course, an unavoidable misfortune that as the train